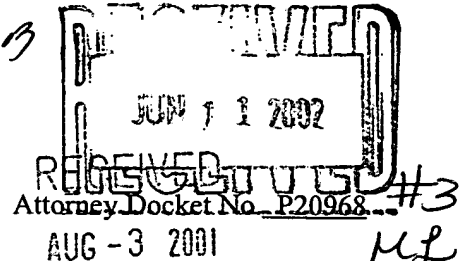


**GREENBLUM & BERNSTEIN, P.L.C.**  
**Intellectual Property Causes**  
 1941 Roland Clarke Place  
 Reston, VA 20191  
 (703) 716-1191



In re application of: YASUAKI YUDA et al.

Serial No. : 09/846,390

**Box Non-Fee**

Group Art Unit : 2821 TECHNOLOGY CENTER 2800

Filed : May 2, 2001

Examiner : Not Yet Assigned

For : DIRECTION OF ARRIVAL ESTIMATOR AND DIRECTION OF ARRIVAL ESTIMATION METHOD

THE COMMISSIONER OF PATENTS AND TRADEMARKS  
 Washington, D.C. 20231

**RECEIVED**

JUN 11 2002

Sir:

Technology Center 2800

Transmitted herewith is a Preliminary Amendment in the above-captioned application.

- ☐ Small Entity Status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a verified statement previously filed.
- ☐ A verified statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.
- ☒ An Information Disclosure Statement, PTO Form 1449, and references cited.
- ☐ No additional fee is required.

The fee has been calculated as shown below:

Claims After Amendment	No. Claims Previously Paid For	Present Extra	Small Entity		Other Than A Small Entity	
			Rate	Fee	Rate	Fee
Total Claims: 9	*20	0	x 9=	\$	x 18=	\$0.00
Indep. Claims: 3	**3	0	x 40=	\$	x 80=	\$0.00
Multiple Dependent Claims Presented			+135=	\$	+270=	\$0.00
Extension Fees for Month				\$		\$0.00
Total:				\$	Total:	\$0.00

\*If less than 20, write 20

\*\*If less than 3, write 3

☐ Please charge my Deposit Account No. 19-0089 in the amount of \$\_\_\_\_\_.

☒ A Check in the amount of \$\_\_\_\_\_ to cover the filing/extension fee is included.

☒ The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 19-0089.

☒ Any additional filing fees required under 37 C.F.R. 1.16.

☒ Any patent application processing fees under 37 C.F.R. 1.17, including any required extension of time fees in any concurrent or future reply requiring a petition for extension of time for its timely submission (37 CFR 1.136)(a)(3).

Bruce H. Bernstein  
 Reg. No. 29,027

PN 38630

P20968.A02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Yasuaki YUDA et al.

Group Art Unit: 2821

Serial No. : 09/846,390

Examiner: None Assigned

Filed : May 2, 2001



DIRECTION OF ARRIVAL ESTIMATOR AND DIRECTION OF  
ARRIVAL ESTIMATION METHOD

**INFORMATION DISCLOSURE STATEMENT**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 C.F.R. §1.56 and §§1.97-1.98, the  
Applicant hereby calls the following documents to the Examiner's attention:

“Detection of Direction and Number of Impinging Signals in array Antenna Using  
Cyclostationarity” by Hiroyuki Tsuji et al., Collection of Institute of Electronics, Information  
and Communication Engineers, ‘98/1 Vol. J81-B-II No. 1, pp.19-28, (referred to on page 6  
of the specification). An English language translation of (a portion of) Section 3.1 is also  
provided; and

Japanese Laid-open Patent Publication No. 11-251964, published September 1999.  
An English language abstract of the same is provided.

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TECHNOLOGY CENTER 2800

P20968.A02

A copy of the above-noted documents are attached and have been listed on a PTO-1449 Form which is also attached hereto. Accordingly, the Examiner is requested to initial the appropriate spaces on the attached PTO-1449 Form and to return a copy of the Form to the Applicant with the next official communication in the present application to confirm consideration of this document.

Applicant also calls the following copending, commonly assigned documents to the Examiner's attention:

U.S. Patent Application No. 09/272,624 to MIYA et al. , filed on March 19, 1999;

U.S. Patent Application No. 09/413,367 to FUKAGAWA et al. , filed on October 6, 1999; and

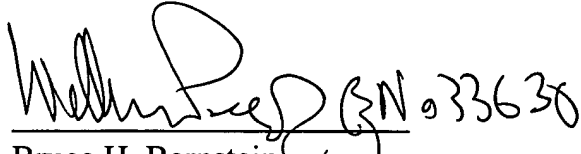
U.S. Patent Application No.09/639,996 to NAKAGAWA et al., filed on August 17, 2000.

In accordance with 37 C.F.R. §1.98(a)(2)(iii), copies of the specification, claims, and drawings of the above-mentioned co-pending applications are attached hereto. The Examiner is, none-the-less, encouraged to review the file wrapper of these U.S. patent applications at the U.S. Patent and Trademark Office. If for any reason the Examiner cannot locate any of the applications, the Applicant will provide any requested materials, if possible.

P20968.A02

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
Yasuaki YUDA et al.

  
Bruce H. Bernstein  
Reg. No. 29,027

July 31, 2001  
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U.S. Department of Commerce  
Patent and Trademark Office

Serial No.  
09/846,390

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**  
(Use several sheets if necessary)

**Applicant**  
**Yasuaki YUDA et al.**

Filing Date  
May 2, 2001

Group  
2821

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

		1	English Language Abstract of JP 11-251964.
		2	“Detection of Direction and Number of Impinging Signals in array Antenna Using Cyclostationarity” by
			Hiroyuki Tsuji et al., Collection of Institute of Electronics, Information and Communication Engineers, ‘98/1
			Vol. J81-B-II, No. 1, pp. 19-28, and an English language translation of (a portion) Section 3.1.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.